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IS 4965 (1991): Textiles - Vests, cotton, interlock-knitted
[TXD 10: Hosiery]



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भारतीय मानक
वस्त्रादि — इंटरलॉक बुनी सूती बनियान — विशिष्ट
(दूसरा पुनरीक्षण)

Indian Standard

TEXTILES — VEST, COTTON, INTERLOCK
KNITTED — SPECIFICATION

(Second Revision)

UDC 687.254.51

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Hosiery Sectional Committee had been approved by the Textile Division Council.

The standard was originally published in 1968 covering the requirements of knitted fabric used for manufacturing the vest as well as the requirements of the tailored vest. This standard was first revised in 1975 and was published in two parts — Part 1 covering the requirements of interlock knitted fabric, and Part 2 covering the requirements of tailored vest. The requirements of interlock fabric, which were earlier covered by IS 4965 (Part 1) : 1975, are now being separately covered in IS 13003 : 1990, since the interlock knitted fabric is used for fabricating other garments, such as T-shirt, underwear, etc, in addition to vest. Further, the dimensions of vest have been rationalized in such a manner as to enable the manufacturers to meet the demand of consumers of different types of vest. The depth of hem, folding and tape/welt at various places of the vest have also been amended, specifying only minimum values.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — VEST, COTTON, INTERLOCK KNITTED — SPECIFICATION

(Second Revision)

1 SCOPE

1.1 This standard prescribes the requirements of grey, scoured, bleached, dyed or printed interlock knitted cotton vest with or without sleeves of round- or V-neck type.

1.2 This standard does not specify general appearance, feel, lustre, degree of whiteness, shade, colour or print design of vest (*see* 5.3).

2 REFERENCES

2.1 The standards listed in Annex A are necessary adjunct to this standard.

3 TERMINOLOGY

3.1 For the purpose of this standard the definitions given in IS 3596 : 1967 in addition to the following shall apply (*see also* SP 45 : 1988).

3.2 Folding

A process of covering a cut edge of a fabric with a piece of fabric, by folding and stitching, for giving appropriate finish to the garment as an embellishment.

4 MANUFACTURE AND FINISH

4.1 Fabric

The vest shall be tailored out of well and evenly knitted tubular interlock fabric (*see also* IS 13003 : 1991).

4.1.1 The width of the fabric roll from which the vest is to be tailored shall correspond to the size of vest.

4.2 The style and shape of vest shall be as detailed below. The wales shall run along the length of the vest and sleeves:

- a) Round-neck sleeveless (RN), Fig. 1A and short sleeves (RNS), Fig. 1B; and
- b) V-neck, sleeveless (VN), Fig. 2A and short sleeves (VNS), Fig. 2B.

4.3 Seams and Stitches

4.3.1 The type of stitch (*see* IS 11161 : 1985) and count of sewing thread for seams and

stitches (*see* IS 10789 : 1983) at various portions of vest shall be as given in Table 1. However, the vest with folding shall be sewn by reverse flat-lock as detailed in Table 1, Sl No. (iii) (b). All the stitches shall be of even tension throughout with all loose ends fastened.

4.3.2 The minimum depth of hem, width of folding or width of tape/welt at bottom, at arm holes, at sleeves and at neck opening shall be as under:

	Size (<i>see</i> Note under 5.1)	
	(All dimensions in millimetres)	
	40 to 70	75 to 110
Depth of hem or width of folding at neck and arm-hole openings for RN vest	5	9
Depth of hem or width of folding at neck opening for RNS vest	5	9
Width of folding at bottom for all vest and at sleeves for RNS/VNS vest	5	9
Depth of hem at bottom for all vest and at sleeves for RNS/VNS vest	15	25
Width of tape/welt at bottom for all vest and at sleeves for RNS/VNS vest	20	20
Width of tape/welt at neck opening for VN/VNS vest and at armhole openings for VN vest	20	20

4.4 The knitted fabric from which vest is tailored shall not be over-boarded.

4.5 The tailored vest may also be screen or transfer printed, with motifs or design, as required by the buyer.

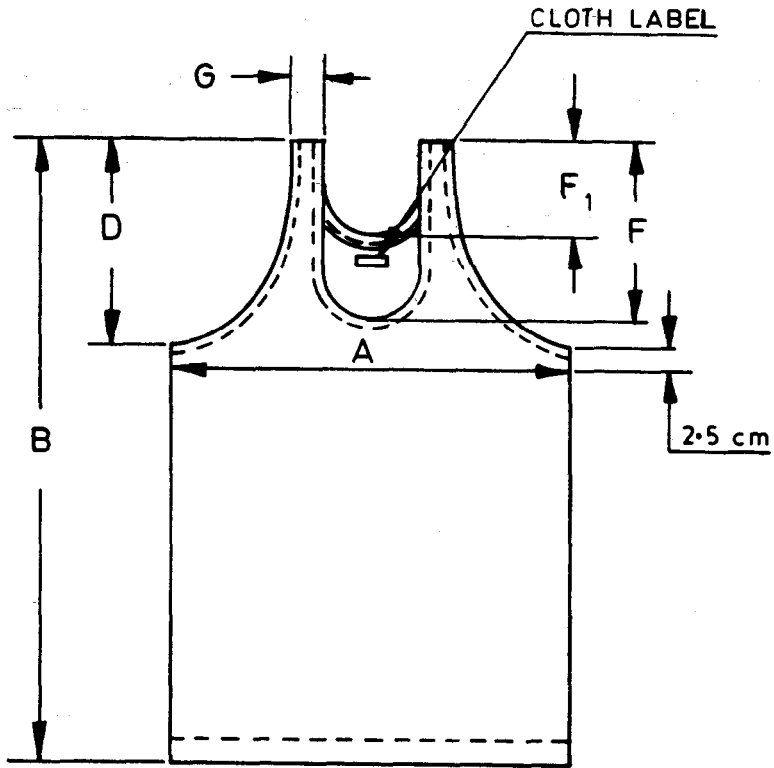


FIG. 1A ROUND-NECK SLEEVELESS

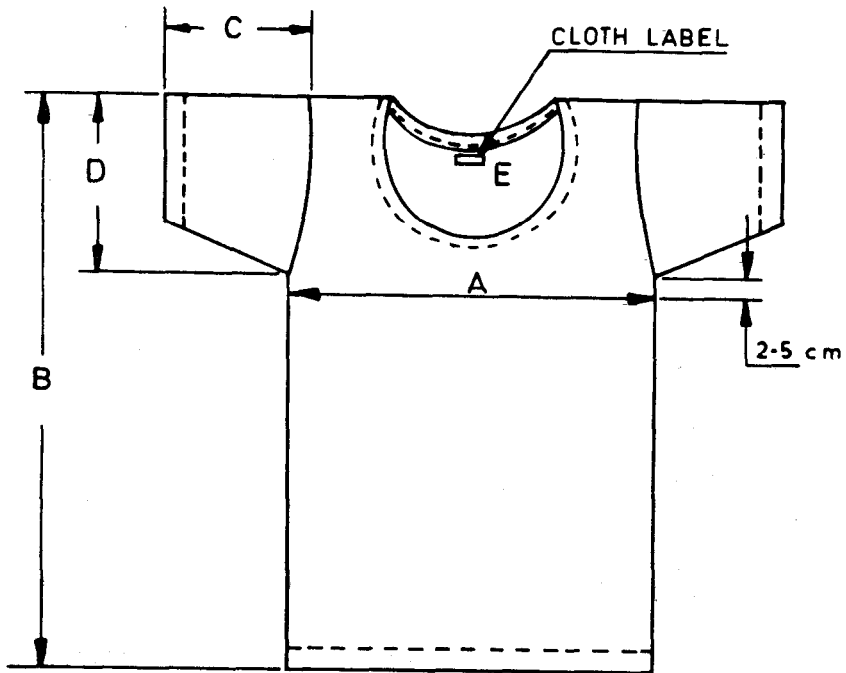


FIG. 1B ROUND-NECK SHORT SLEEVES

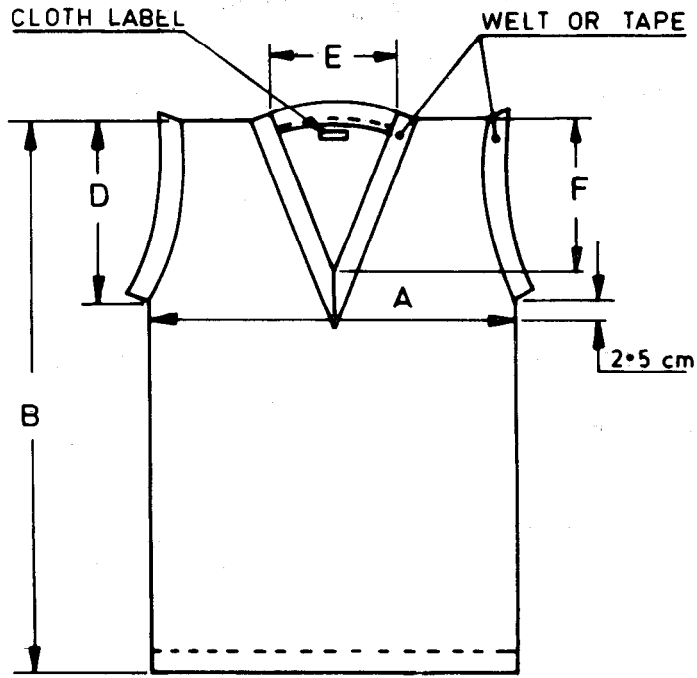


FIG. 2A V-NECK SLEEVELESS

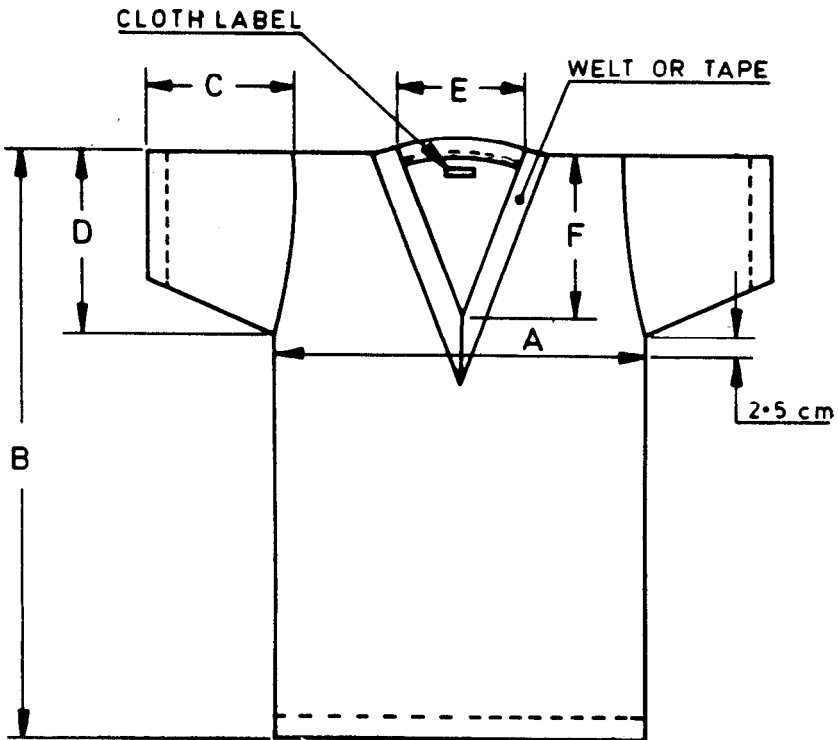


FIG. 2B V-NECK SHORT SLEEVES

Table 1 Seams and Stitches
(Clause 4.3.1)

Sl No.	Portion to be Stitched	Type of Stitch	Number of Stitches per cm, Min	Recommended Thread* in the Needle(s)	Recommended Thread* in the Loooper(s)
(1)	(2)	(3)	(4)	(5)	(6)
i)	Shoulder pieces, sleeves to the vest and underarms, tape/welt sewn to neck-opening armholes, sleeves and bottom	3-thread overlock	4	One strand of 60s/3 (100 d tex × 3) cotton sewing thread	Two strands of 40s/2 (145 d tex × 2) cotton sewing thread
ii)	Hemming at the bottom and elbow ends of sleeves	2/3 thread overlock	4	One strand of 60s/3 (100 d tex × 3) cotton sewing thread	1/2 strand(s) of 40s/2 (145 d tex × 2) cotton sewing thread
iii)	Hemming at sleeves and armholes of sleeveless vest	a) Double Chain	4	One strand of 60s/3 (100 d tex × 3) cotton sewing thread	One strand 60s/3 (100 d tex × 3) cotton sewing thread
		or b) Flat-lock	4	Three strands of 60s/3 (100 d tex × 3) cotton sewing thread	One strand of 40s/2 (145 d tex × 2) cotton sewing thread in combination with one strand of 33 tex (300 denier) rayon or Both the strands of cotton sewing thread or rayon of the particulars stated above

*For sewing threads refer to IS 1720 : 1978 Variety No. 2, 3, 4, 5, 12, 13, 15 or 16; or IS 9543 : 1980 Variety No. 1, 2, 3, 4 or 5.

4.6 Freedom from Defects

The vest shall be visually examined and they shall be evenly sewn or stitched at neck opening, armholes, sleeves and at bottom and shall be free from missed stitches, holes and cuts. It shall also be reasonably free from knitting defects such as large mends, ladders and dropped stitches, and defective sewing at hem folding or tape/welt. The vest shall also be free from chemical damages like defective bleaching, in case of bleached vest; streaks, stains and uneven dyeing, in case of dyed vest; and improper printing in case of printed vest. The vest shall be free from any other defect which may significantly mar the appearance or serviceability.

5 REQUIREMENTS

5.1 Dimensions

The dimensions of vest when measured by the method prescribed in Annex B shall conform to the requirements given in Table 2.

NOTE — The size is designated by a number which is the numerical value of chest girth of vest in cm. For example, an 80 size vest represents the vest with chest girth of 80 cm.

5.2 Other Requirements

The vest shall satisfy the requirements in respect of construction, dimensional change (due to relaxation), pH value of aqueous extract and colour fastness (including prints on finished vest) as given in IS 13003 : 1991.

5.3 Sealed Sample

In order to illustrate or specify the indeterminate characteristics such as general appearance, degree of whiteness, colour shade or print design of vest, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

5.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

6 MARKING

6.1 A suitable cloth label, woven or printed (see Note), shall be fastened to each vest at the inside of the neck portion (backside) on which the following shall be indicated:

- Size in cm (see 5.1);
- Designation of fabric (see IS 13003 : 1991);
- Indication of the source of manufacture;
- Care labelling, if required by the buyer (see IS 4418 : 1967); and
- Code for differentiating the same designation of vest with different count of yarn, if required by the buyer.

NOTE — The indications on the cloth label shall be such that the colour from the label shall not bleed on to the vest during storage or use.

Table 2 Dimensions of Vest — Round-Neck/V-Neck, Sleeveless (RN or VN) and Short Sleeves (RNS or VNS)

(Clause 5.1)

All dimensions in centimetres.

Size	Width Across Chest	Length of Vest <i>Min</i>	Length of Sleeves*, RNS/VNS	Length of Armhole*, RN/RNS/ VN/VNS	Round-Neck Opening* RNS†	RN			VN/VNS	
						Depth of Neck Front <i>Min</i>	Opening Back <i>Min</i>	Width of Shoulder Strap <i>Min</i>	Width of Neck Opening <i>Min</i>	Depth of Neck Opening <i>Min</i>
(1)	A	B	C	D	E	F	F ₁	G	E	F
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
40	20.0	32.0	8.0	10.0	42.0	11.0	6.0	↑	7.0	8.0
45	22.5	36.0	9.0	11.0	44.0	11.0	6.0		7.0	9.0
50	25.0	40.0	10.0	13.0	46.0	13.0	6.0		8.0	10.0
55	27.5	44.0	11.0	14.0	49.0	13.0	6.0	1.5	9.0	11.0
60	30.0	48.0	12.0	15.0	52.0	14.0	7.0		10.0	13.0
65	32.5	52.0	13.0	16.0	54.0	14.0	7.0		11.0	14.0
70	35.0	56.0	14.0	18.0	56.0	15.0	8.0	↓	12.0	15.0
75	37.5	60.0	15.0	19.0	58.0	15.0	8.0	↑	12.0	16.0
80	40.0	64.0	16.0	20.0	60.0	16.0	8.0		13.0	18.0
85	42.5	68.0	17.0	21.0	61.0	16.0	8.0		14.0	19.0
90	45.0	72.0	18.0	23.0	62.0	18.0	9.0	3.0	15.0	20.0
95	47.5	76.0	19.0	24.0	63.0	18.0	9.0		16.0	21.0
100	50.0	80.0	20.0	25.0	64.0	19.0	9.0		17.0	23.0
105	52.5	82.0	21.0	26.0	65.0	19.0	9.0		17.0	24.0
110	55.0	84.0	22.0	27.0	65.0	20.0	10.0	↓	18.0	25.0
Tolerance	± 1.5	—	± 1.0	± 2.0†	± 2.0	—	—	—	—	—

*These dimensions may be varied if desired by the buyer due to geographical conditions or the preference of consumers. However, the declared values shall be subjected to the tolerance specified.

†B-3 gives the recommended method for measurement of the dimension of round-neck opening.

‡In case of RNS/VNS vests the specified values in the column are maximum, and shall be subjected only to the negative tolerance of -2.0 cm.

6.2 The vest(s) shall be packed in polyethylene or polypropylene bags and/or in box(es), as required by the buyer. However, on each box the following shall be indicated:

- Name of material;
- Count of yarn and type (carded or combed);
- Designation of fabric (see IS 13003 : 1991);
- Vest style (see 4.2) and size in cm (see 5.1);
- 100 percent cotton, if required by the buyer;
- Quantity per box;
- Indication of the source of manufacture; and
- Any other information as required by the buyer or the law in force.

6.3 The vest or box may also be marked with the Standard Mark, details for which may be obtained from the Bureau of Indian Standards.

7 PACKING

7.1 The vest shall be well packed, preferably in accordance with IS 3086 : 1965 or IS 3325 : 1965 as the case may be.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 The sampling procedure detailed in 8.2 to 8.4 shall give desired protection to the buyer and the seller, provided that the lot submitted for inspection is homogeneous. To achieve this, the manufacturer shall maintain a system of process control at all stages of manufacture ensuring the vests tendered by him for inspection comply with the requirements of this standard in all respects.

NOTE — For effective process control the use of statistical quality control technique is recommended and helpful guidance may be obtained in this respect from IS 397 (Part 1) : 1972 and IS 397 (Part 2) : 1985.

8.2 Lot

In any consignment all vests of the same style size and manufactured from interlock knitted fabric of the same designation and of the same quality and count of yarn and delivered to a buyer against one despatch note shall constitute a lot.

8.2.1 The conformity of a lot to the requirements of this specification shall be determined on the basis of the tests carried out on the samples selected from the lot.

Table 3 Sample Size and Permissible Number of Non-conforming Vests
(Clauses 8.3 and 8.4)

Number of Vests in the Lot	Physical Characteristics		Other Requirements— Number of Vests to be Tested
	Number of Vests to be Inspected	Permissible Number of Non-conforming Vests	
(1)	(2)	(3)	(4)
Up to 300	13	1	3
301 to 500	20	2	5
501 to 1 000	32	3	5
1 001 and above	50	5	8

8.3 Unless otherwise agreed to between the buyer and the seller, a number of vests depending upon the size of the lot shall be selected at random from the lot to constitute the gross sample. The number of vests so selected shall be in accordance with col 2 of Table 3.

8.4 The number of vests to be tested and criterion for conformity for each of the characteristics shall be as follows:

Characteristics	Number of Vests to be Tested	Criterion for Conformity
a) Physical		
Visual inspection, manufacture and dimensions	See col 2 of Table 3	Non-conforming vests not to exceed the corresponding number given in col 3 of Table 3
b) Other Requirements		
i) Construction, dimensional change and pH value	See col 4 of Table 3	All the vests to satisfy the relevant requirements
ii) Colour fastness	1 each of the same colour, shade and/or print for lot size up to 500, and 2 above 500	All the test specimens satisfy the relevant requirements

ANNEX A

(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
397 (Part 1) : 1972	Method for statistical quality control during production: Part 1 Control charts for variables (<i>first revision</i>)	4418 : 1967	Guide for care-labelling of textiles for laundering and dry-cleaning
397 (Part 2) : 1985	Method for statistical quality control during production: Part 2 Control charts for attributes and count of defects (<i>second revision</i>)	6359 : 1971	Method for conditioning of textiles
1720 : 1978	Cotton Sewing Threads (<i>second revision</i>)	9543 : 1980	Spun polyester sewing threads
3086 : 1965	Code of seaworthy packaging of cotton hosiery yarn and goods	10789 : 1983	Classification and terminology of stitch types used in seams
3325 : 1965	Code of inland packaging of cotton hosiery yarn and goods	11161 : 1985	Textiles — seam types — classification and terminology
3596 : 1967	Glossary of terms relating to hosiery	13003 : 1991	Textiles — fabric, cotton, interlock knitted — Specification
		SP 45 : 1988	BIS Handbook on glossary of textile terms

ANNEX B
(*Clause 5.1, and Table 2*)

METHOD OF TEST

B-1 CONDITIONING OF TEST SPECIMENS AND ATMOSPHERIC CONDITIONS FOR TESTING

B-1.1 The test specimen shall be tested in prevailing atmospheric conditions. In case of dispute, the sample shall be conditioned and tested in the standard atmosphere as given in IS 6359 : 1971.

B-2 DIMENSIONS

B-2.1 Take each vest constituting the test specimens. Lay it flat on a table. Remove all creases and wrinkles without distorting the specimen. Measure nearest to 0.5 cm, the dimensions given in Table 2. For RNS vest, the

method recommended in **B-3** may be followed for measuring the dimension of neck opening.

B-3 MEASUREMENT OF ROUND-NECK OPENING

B-3.1 In case of RNS vest, it is suggested that the measurement of round-neck opening be carried out by first laying down the vest flat on a table. Remove all creases and wrinkles and without distorting the specimen place in non-extensible thread along the periphery of the neck opening starting from the place where the neck label has been fastened. Measure the length of the thread passed around the neck opening. Measure the dimension nearest to 0.5 cm.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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